

Amendments to the Specification

Please replace the paragraph on page 1, beginning at line 18 with the following amended paragraph:

One common technique for orienting a whipstock in the well utilizes a counterweight. A counterweight, like a clock pendulum, seeks its lowest point. A whipstock with a counterweight acts like a pendulum, trying to orient the whipstock face to the high side. Selectively orienting the whipstock by use of a counterweight to any desired orientation when in an inclined portion of the borehole, despite the whipstock's natural tendency, is similar to selectively orienting a clock pendulum by attaching to it a second, heavier clock pendulum at a proper relative orientation with a common pivot point. This technique for selectively orienting a whipstock face in a well has been used for decades, in spite of the inherent disadvantages in both the cost and the axial length required to ensure that the counterweight has sufficient capability to orient the whipstock face to the desired orientation in the well.

Please replace the paragraph on page 2, beginning at line 10 with the following amended paragraph:

Figure 2 is a top view of a portion of Figure 1, showing a key positioned a short distance from the bottom of a slot in the whipstock body in the run-in position.

Please replace the paragraph on page 3, beginning at line 10 with the following amended paragraph:

After the whipstock assembly is run in the well at a desired depth, deliberate actuation of the bidirectional setting tool 3 produces an upward force on the setting rod 10 substantially equal and opposite to the downward force on the connector sub 4 / neutralizer 11 assembly. As the forces increase, the shearable fastener(s) 6, & 12 connecting the connector sub 4 / neutralizer 11 assembly to the whipstock body 8 shear, allowing the connector sub 4 / neutralizer 11 assembly to move a short distance in a downward direction relative to the whipstock body 8, as shown in Figures 8, 9 and 10. In this process, a key 5 is brought into axial contact with the whipstock body 8, thereby redirecting the downward load path, as shown in Figures 8 and 9. At some stage, the upward force acting on the setting rod 10, through the locking mandrel 14, nut 20, belleville washers 19 and wedge 18, causes the wedge shear pin(s) 15 between the whipstock body 8 and the wedge 18 to shear, allowing the wedge 18 to move upward and radially outward, until the body slip(s) 17 and wedge slip(s) 16 contact the casing wall, forcing the whipstock body 8 into the set position. After the whipstock body 8 has been reliably set, locked by the interaction of the locking mechanism 13 and the locking mandrel 14, the upward force may be increased to a level which tensionally fractures a calibrated area of the setting rod 10, allowing the entire setting assembly to be freely detached from the whipstock body 8. Picking up on the setting assembly then brings the upper beveled surface 21 of the key 5 into engagement with the upper beveled surface at 21 of the top of the slot in the whipstock

body 8, thereby forcing the key 5 radially ~~beveled surface 21 of the key 5 into engagement with the upper beveled surface 21 of the top of the slot in the whipstock body 8, thereby forcing the key 5 radially inward, thereby disengaging the key 5 from the whipstock body 8, as shown in Figure 12.~~

Please replace the paragraph beginning on page 4, at line 5 with the following amended paragraph:

A key 5 allows this radial movement, with the setting rod 10 passing through the bore in the neutralizer 11 and then through the central bore in the whipstock body 8. Once the connector sub 4 and neutralizer 11 are released from the whipstock body 8, the run-in string including the neutralizer 11 and the counterweight 2 may be retrieved to the surface, with the whipstock body 8 remaining set in the well. The counterweight 2 is releasably securable to the whipstock body, and has an offset counterweight center of gravity such that the counterweight occupies a low side of the wellbore. Threads between the counterweight 2 and the setting tool 3, and/or between the setting tool 3 and the connector sub 4, as shown in Figure 1, may be selectively made up and pinned to act as an orientation device to orient the whipstock face at a selected rotational position relative to the counterweight.

Please replace the paragraph beginning on page 4, at line 11 with the following amended paragraph:

In a preferred embodiment, the neutralizer may occupy the unutilized space of the volume that was removed on the whipstock body during the manufacture of the whipstock body, i.e., the space radially outward of the whipstock face. The whipstock body 8 has a whipstock center of gravity offset radially from a central axis of the whipstock body. The neutralizer 11 is releasably secured to the whipstock body, and has a neutralizer center of gravity radially opposite the whipstock center of gravity with respect to the central axis of the whipstock body. The combined whipstock/neutralizer center of gravity is substantially closer to the central axis of the whipstock body than the whipstock center of gravity. Also, the neutralizer may be removed from the whipstock body ~~outward surface~~ in order to allow additional confidence in the ability to set for a highside exit. For a highside exit, a counterweight may thus not be required.

Please replace the paragraph beginning on page 4, at line 17 with the following amended paragraph:

In a preferred embodiment, ~~a~~ the feature of the key and the whipstock body would include tabs 30 on one of the key and whipstock body, as shown in Figure 3, to prevent premature retraction of the key from the whipstock body. A slot in the whipstock body preferably includes a relief section 32, as shown in Figure 2 which allows retraction of the key only after the whipstock has been fully set in the well. Each of the key and a connector

sub set may include mating surfaces 34 as shown in Figure 3 to prevent the key from excessive movement radially outward, thereby preventing the key from extending beyond the desired diameter. Shear pin 12 may be used to limit movement of the neutralizer with respect to the whipstock body prior to setting the whipstock. The shear pin 12 and the key 5 together may constitute a detaching mechanism for releasing the neutralizer from the whipstock body.

Please replace the paragraph beginning on page 5, at line 8 with the following amended paragraph:

The initial downward movement of the neutralizer ensures clean and complete shearing of the shear pin. This allows for effortless removal of the neutralizer once setting of the whipstock is complete. Because the key fits into a slot in the body, which has is a top end termination, less ~~no~~ capture area or strength to the whipstock body is compromised than ~~then~~ the prior art systems in which the slot in the body runs out. A beveled interface between the two members allows the use of a relatively short slot. In one embodiment, the inclined face of the whipstock body intercepts a substantially cylindrical outer surface of the whipstock body, and the counterweight includes an outer substantially cylindrical surface with substantially the same diameter as the outer surface of the whipstock body. As shown in Figure 13, at least a portion of the neutralizer includes an engagement surface for substantially planar contact with the whipstock face when the neutralizer is secured in a whipstock body.